WHAT IS CLAIMED IS:

1. A method of producing and compressing a video signal, the method comprising the steps of:

illuminating a video subject with a known lighting source having a predetermined spectral band concentrated within a subset of a visible light spectrum;

recording said video subject to produce a video signal representative of said illuminated video subject;

periodically in frequency eliminating color values from said video signal;

substantially eliminating from said video signal color values which fall outside of said subset of the visible light spectrum; and

compressing said video signal.

2. The method of claim 1 wherein said visible light subset consists essentially of colors having wavelengths within the region defined by 390-690 nm.

3. The method of claim 1 wherein said lighting source comprises a tri-phosphor fluorescent lamp, and said visible light spectrum comprises three discrete bands generally centered about red, green, and blue colors.

4. The method of claim 1 wherein said periodically eliminating step comprises:

periodically removing color values from a predetermined high eye response band of said video signal in order to decrease possible color values numbers within said filtered video signal;

replacing a first range of color values in said video signal with first replacement color values in order to decrease possible color value numbers within said video signal.

5. The method of claim 4 wherein said compression step comprises lossy MPEG compression.

6. A method of producing a compressed video signal comprising the steps of:

illuminating a subject with a light source having a known spectral distribution, said spectral distribution being concentrated within a subset of the visible light spectrum;

capturing said video image to produce a video signal;

providing said video signal to a video compression processor;

programming said video compression processor to substantially not encode color values which fall outside of said subset of the visible light spectrum.

7. The method of claim 6 wherein said visible light subset consists essentially of colors having wavelengths within the region defined by 390-690 nm.

8. The method of claim 6 wherein said video compressor processor is an MPEG encoder, and said programming step includes selecting appropriate color value parameters for encoding said video signal.

9. A video encoder for encoding video images, comprising:

a processor; and

a program to be used by said processor, said program including a plurality of color value parameters;

wherein said color value parameters are determined in accordance with spectral output characteristics of a reduced spectrum lighting source.

10. The method of claim 9 wherein said processor is programmed to encode a color band consisting essentially of 390-690 nm.

11. The video encoder of claim 9 wherein said processor is an MPEG video processor, and said color value parameters include color wavelength values.

12. The video encoder of claim 9 wherein said color value parameters are chosen to provide substantial encoding for three bands of color centered about the red, green, and blue wavelengths, and to substantially not encode discrete bands of

color between the red and green wavelengths, and between the green and blue wavelengths.

13. The video encoder of claim 12 wherein said color value parameters are further chosen to substantially not encode wavelengths below 390 nm, and to substantially not encode wavelengths above 690 nm.